In the claims:

1.   A layer 2 switch which conducts processing of terminating a layer 2 frame and processing of a layer 2 frame in which an expansion VLAN tag is stacked, comprising

        a unit which, when a transmission destination area of said frame is different from a transmission source area, rewrites said expansion VLAN tag of said frame into an expansion VLAN tag of the transmission destination area.

2.   The layer 2 switch as set forth in claim 1, comprising

        a first table which stores header information of said frame and information indicates from which area said frame is received so as to correspond with each other.

3.   The layer 2 switch as set forth in claim 2, wherein

        said table includes a second table which stores information of said expansion VLAN tags of said transmission source area and said transmission destination area so as to correspond with each other.

4.   The layer 2 switch as set forth in claim 1, comprising:

a first table which stores header information of said frame and information indicates from which area said

425   frame is received so as to correspond with each other,

said table including a second table which stores information of said expansion VLAN tags of said transmission source area and said transmission destination area so as to correspond with each other,

430   wherein

said first table is searched based on the header information of said frame and when the transmission destination area of said frame is different from the transmission source area, the expansion VLAN tag of the

435   transmission destination area is obtained from said second table to rewrite the expansion VLAN tag of said frame.

5.   The layer 2 switch as set forth in claim 1,

440   wherein

said layer 2 frame is an Ethernet frame.

6.   The layer 2 switch as set forth in claim 1, wherein

445   when a plurality of said expansion VLAN tags are applied to said layer 2 frame, an expansion VLAN tag at the top or all the expansion VLAN tags are rewritten by said expansion VLAN tag of said transmission destination area.

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7.   The layer 2 switch as set forth in claim 3, wherein

       information of said expansion VLAN tags of said transmission source area and said transmission

455   destination area so as to one-to-one correspond with each other is stored in said second table.

8.   The layer 2 switch as set forth in claim 1, comprising

460   a unit for one-to-one connecting LANs which handle said layer 2 frame to enable communication between LANs having the layer 2 frames whose kinds are different.

9.   The layer 2 switch as set forth in claim 8,

465   wherein

       information of said expansion VLAN tags of said transmission source area and said transmission

       destination area so as to one-to-one correspond with each other is stored in said second table.

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10.   The layer 2 switch as set forth in claim 1, comprising

       a unit for one-to-N connecting LANs which handle said layer 2 frame to enable communication between LANs

475   having said layer 2 frames whose kinds are different.

11.   The layer 2 switch as set forth in claim 10, wherein

480   information of said expansion VLAN tags of said transmission source area and said transmission destination area so as to one-to-N correspond with each other is stored in said second table.

12.   The layer 2 switch as set forth in claim 1,
485   comprising

          a unit for N-to-N connecting LANs which handle said layer 2 frame to enable communication between LANs having said layer 2 frames whose kinds are different.

490   13.   The layer 2 switch as set forth in claim 12, wherein

          information of said expansion VLAN tags of said transmission source area and said transmission destination area so as to N-to-N correspond with each
495   other is stored in said second table.

14.   A method of termination processing of a layer 2 frame and of processing an expansion VLAN tag of a layer 2 frame in which an expansion VLAN tag is stacked,
500   comprising the step of

          rewriting, when a transmission destination area of said frame is different from a transmission source area, said expansion VLAN tag of said frame into an

expansion VLAN tag of the transmission destination area.

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15. The method of processing an expansion VLAN tag of a layer 2 frame as set forth in claim 14, comprising:

a first table which stores header information of said frame and information indicates from which area said

510 frame is received so as to correspond with each other,

said table including a second table which stores information of said expansion VLAN tags of said transmission source area and said transmission destination area so as to correspond with each other,

515 wherein

said first table is searched based on the header information of said frame and when the transmission destination area of said frame is different from the transmission source area, the expansion VLAN tag of the

520 transmission destination area is obtained from said second table to rewrite the expansion VLAN tag of said frame.

16. The method of processing an expansion VLAN tag of

525 a layer 2 frame as set forth in claim 14, wherein

said layer 2 frame is an Ethernet frame.

17. The method of processing an expansion VLAN tag of a layer 2 frame as set forth in claim 14, wherein

530 when a plurality of said expansion VLAN tags are

applied to said layer 2 frame, an expansion VLAN tag at the top or all the expansion VLAN tags are rewritten by said expansion VLAN tag of said transmission destination area.

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18.   The method of processing an expansion VLAN tag of a layer 2 frame as set forth in claim 15, wherein

storing information of said expansion VLAN tags of said transmission source area and said transmission

540   destination area so as to one-to-one correspond with each other in said second table.

19.   The method of processing an expansion VLAN tag of a layer 2 frame as set forth in claim 14, comprising

545   a unit for one-to-one connecting LANs which handle said layer 2 frame to enable communication between LANs having the layer 2 frames whose kinds are different.

20.   The method of processing an expansion VLAN tag of

550   a layer 2 frame as set forth in claim 19, wherein

storing information of said expansion VLAN tags of said transmission source area and said transmission destination area so as to one-to-one correspond with each other in said second table.

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21.   The method of processing an expansion VLAN tag of a layer 2 frame as set forth in claim 14, comprising

a unit for one-to-N connecting LANs which handle
said layer 2 frame to enable communication between LANs
560   having said layer 2 frames whose kinds are different.

22.   The method of processing an expansion VLAN tag of
a layer 2 frame as set forth in claim 21, wherein
        storing information of said expansion VLAN tags
565   of said transmission source area and said transmission
destination area so as to one-to-N correspond with each
other in said second table.

23.   The method of processing an expansion VLAN tag of
570   a layer 2 frame as set forth in claim 14, comprising
        a unit for N-to-N connecting LANs which handle
said layer 2 frame to enable communication between LANs
having said layer 2 frames whose kinds are different.

575   24.   The method of processing an expansion VLAN tag of
a layer 2 frame as set forth in claim 23, wherein
        storing information of said expansion VLAN tags
of said transmission source area and said transmission
destination area so as to N-to-N correspond with each
580   other in said second table.